MSHA's Accident Prevention Program
Safety Idea

SAFETY IS A VALUE!

Wire Rope Safety

Category : Hoisting/Elevators
Mine Type: Underground Coal

Serious accidents have occurred when wire ropes have broken due to shock loading. Slack can develop in a wire rope when its load unexpectedly slows or stops. If a load is reapplied to a slack rope, a shock load will result when the slack runs out.
Shock loading can generate extremely high force on a wire rope. For this reason, it is important to avoid slack rope and to avoid other situations which can shock load a wire rope.

If an obstruction stops a mantrip on the way down a slope, always bring the trip up the slope - never try to continue down.

Maintain and periodically test overspeed switches and slack rope safety mechanisms. Never defeat an overspeed switch or slack rope stop.

Hoists and elevators should all be equipped with overtravel protection. Unintended overtravel can shock load a rope.

Never remove blocking, release brakes or otherwise release a load attached to a wire rope without checking the entire length of the rope to make sure it is not slack or snagged on something.

Maintain slope hoist track in good condition. Anything that impedes the movement of a mantrip down a slope can cause a slack rope. Don't allow debris to accumulate on the track, don't allow erosion which can cause depressions in the track, and make sure the trip runs smoothly along the rails. Immediately correct any condition that slows or stops a mantrip.

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Remember – Safety is a Value that you can LIVE with!